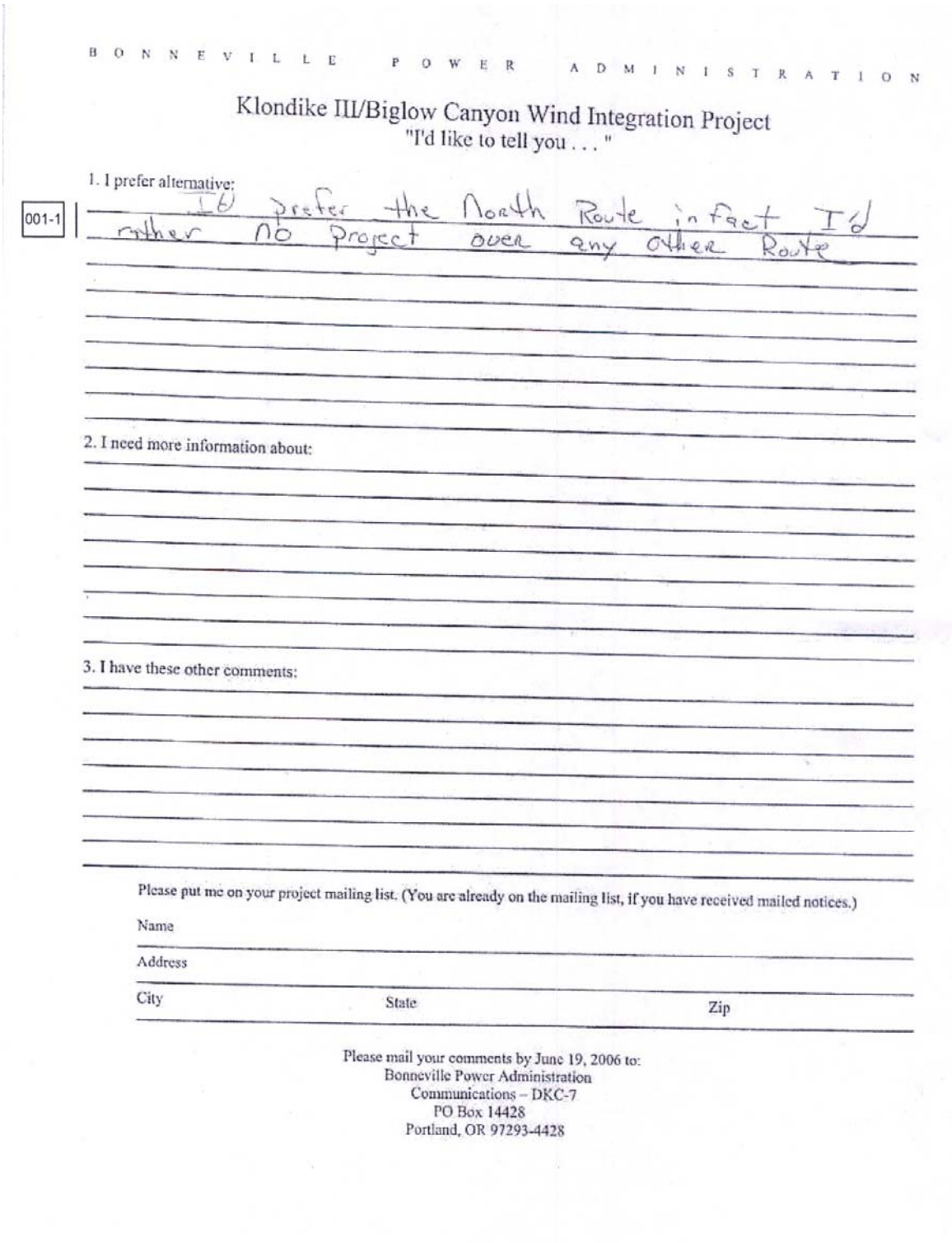
Chapter 10 - Draft EIS Comments and Responses

In this Chapter:

- Comments Received on the Draft EIS
- BPA's Responses to Comments

BPA completed a DEIS for the proposed Klondike III/Biglow Canyon Wind Integration Project and released it to the public for a 45-day review and comment period that ended on June 19, 2006. One public meeting was held in Wasco, Oregon on May 24, 2006 to gather public comments and to answer questions about the DEIS. This chapter contains the written comments from letters and comment sheets received during the comment period for the DEIS and during the public meeting, and BPA's responses to those comments. Letters and comment sheets were given numbers in the order they were received, and the meeting notes also were numbered. Individual comments in these letters and meeting notes were given additional identifying numbers. For example, letter 005 might have comments 005-1 and 005-2 identified within its text. BPA prepared responses to each of these individual comments. The responses follow each letter.

Because this entire chapter is new, and to make it easier to read, the text is not underlined.



BONNEVILLE POWER ADMINISTRATION

Klondike III/Biglow Canyon Wind Integration Project
"I'd like to tell you . . . "

1. I prefer alternative:

001-1 I'd prefer the North Route in fact I'd rather NO Project over any other Route

2. I need more information about:

3. I have these other comments:

Please put me on your project mailing list. (You are already on the mailing list, if you have received mailed notices.)

Name

Address

City State Zip

Please mail your comments by June 19, 2006 to:
Bonneville Power Administration
Communications – DKC-7
PO Box 14428
Portland, OR 97293-4428

Response: 001-1 Comment noted.

BONNEVILLE POWER ADMINISTRATION

Klondike III/Biglow Canyon Wind Integration Project
"I'd like to tell you . . ."

1. I prefer alternative:

002-1 Northern route - if the wind towers are out there the power lines should be there - they want them

2. I need more information about:

3. I have these other comments:

Please put me on your project mailing list. (You are already on the mailing list, if you have received mailed notices.)

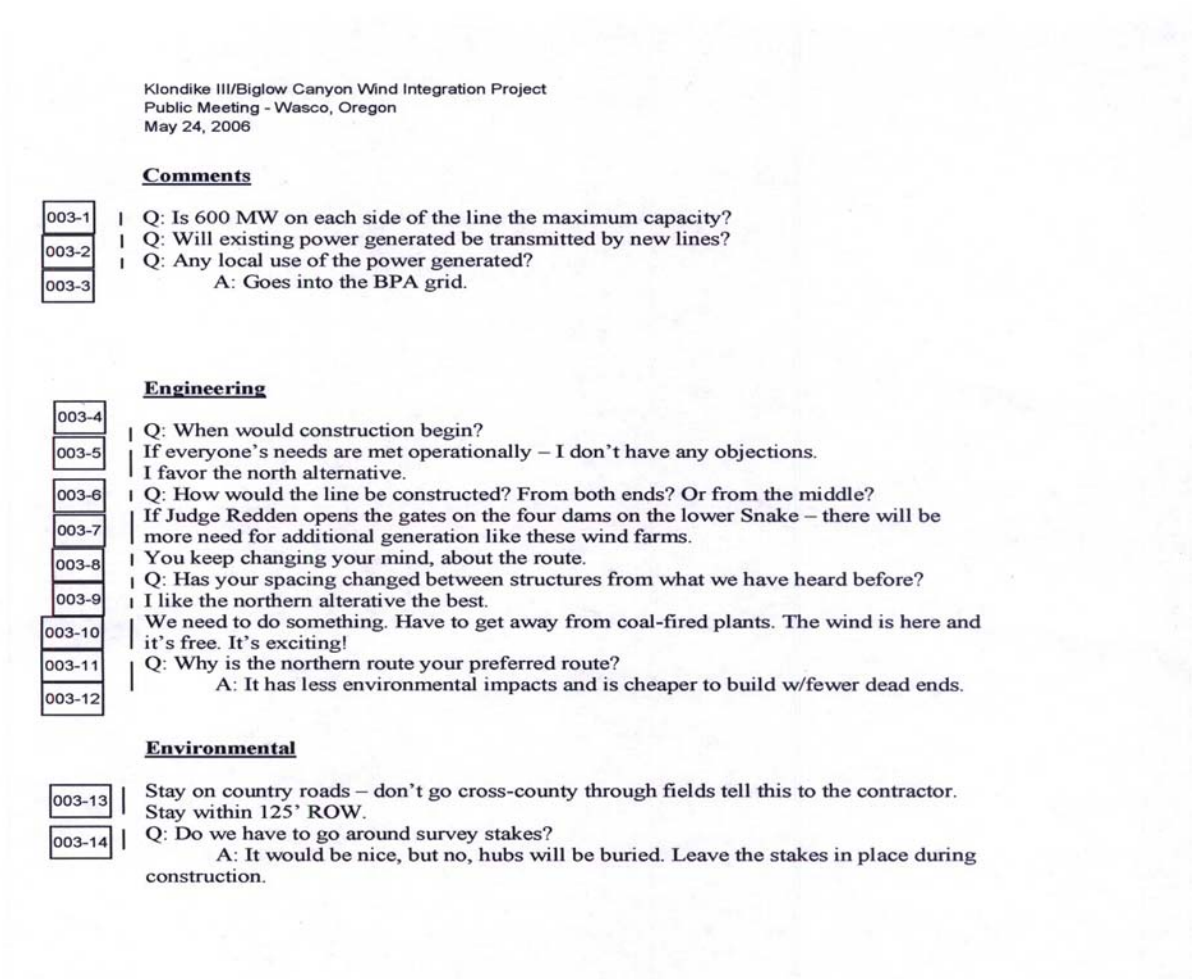
Name

Address

City State Zip

Please mail your comments by June 19, 2006 to:
Bonneville Power Administration
Communications – DKC-7
PO Box 14428
Portland, OR 97293-4428

Response: 002-1 Comment noted.



Klondike III/Biglow Canyon Wind Integration Project
Public Meeting - Wasco, Oregon
May 24, 2006

Comments

003-1 | Q: Is 600 MW on each side of the line the maximum capacity?
003-2 | Q: Will existing power generated be transmitted by new lines?
003-3 | Q: Any local use of the power generated?
A: Goes into the BPA grid.

Engineering

003-4 | Q: When would construction begin?
003-5 | If everyone's needs are met operationally – I don't have any objections. I favor the north alternative.
003-6 | Q: How would the line be constructed? From both ends? Or from the middle?
003-7 | If Judge Redden opens the gates on the four dams on the lower Snake – there will be more need for additional generation like these wind farms.
003-8 | You keep changing your mind, about the route.
003-9 | Q: Has your spacing changed between structures from what we have heard before?
003-10 | I like the northern alterative the best.
003-11 | We need to do something. Have to get away from coal-fired plants. The wind is here and it's free. It's exciting!
003-12 | Q: Why is the northern route your preferred route?
A: It has less environmental impacts and is cheaper to build w/fewer dead ends.

Environmental

003-13 | Stay on country roads – don't go cross-county through fields tell this to the contractor. Stay within 125' ROW.
003-14 | Q: Do we have to go around survey stakes?
A: It would be nice, but no, hubs will be buried. Leave the stakes in place during construction.

Responses:

003-1 Yes, as explained in Chapter 2 of the EIS, BPA's proposed transmission line would be constructed to carry up to 600 MW of capacity in each circuit.

003-2 BPA's proposed transmission line would be intended to transmit power from the two proposed wind projects, which would use most of the capacity of the new line. BPA has received a conditional request from PPM to integrate the power from their Klondike II project, which was connected to the regional transmission grid at another location.

003-3 The power generated would be interconnected to BPA's main transmission grid and the wind developers could sell the power on the open market, or add it to their resource mix.

003-4 If BPA decides to interconnect the wind projects, construction at John Day Substation would be expected to start soon after the Record of Decision (ROD) is signed and published in the Federal Register. Construction of the proposed BPA transmission line would likely begin about 6-7 months after the ROD is signed. The ROD is anticipated to be signed in fall 2006.

003-5 Thank you for your comment.

003-6 The contractor who BPA would select to build the transmission line, if a decision to build a line is made, would determine the sequence of construction and where construction would begin.

003-7 Comment noted.

003-8 The proposed route alternatives have changed over time based on public and landowner comments. BPA has adapted the exact locations of the proposed routes to reduce potential impacts to agricultural practices and to reduce visual impacts.

003-9 The average span length of 900-1200 feet has remained the same.

003-10 Comment noted.

003-11 Comment noted.

003-12 The Northern Alternative has fewer environmental impacts than the Middle Alternative. It is also less expensive because it is shorter and requires lighter dead end towers than the Middle Alternative.

003-13 Comment noted. Access roads for the transmission line would avoid impacting farmland as much as possible. BPA proposes using county roads and the transmission line right-of-way unless conditions require other access locations. BPA would compensate landowners for crop damage if damage occurs during construction or operation and maintenance.

003-14 Survey hubs will be buried. If BPA decides to construct the line, survey stakes used for construction should not be disturbed.

BONNEVILLE POWER ADMINISTRATION

Klondike III/Biglow Canyon Wind Integration Project
"I'd like to tell you . . ."

1. I prefer alternative:
004-1 NORTH

2. I need more information about:

3. I have these other comments: The line is going just south of my house, but I understand it is the cheapest alternative and the "path of least resistance." I want to see windpower/alternative energy succeed - that's why I want the line to go through even though it means I have to look at it!
004-2

Please put me on your project mailing list. (You are already on the mailing list, if you have received mailed notices.)

Name Kathy McCullough

Address

City

Please mail your comments by June 19, 2006 to:
Bonneville Power Administration
Communications – DKC-7
PO Box 14428
Portland, OR 97293-4428

Rec'd 6/1/06

Responses:

004-1 Comment noted.

004-2 Thank you for your comment.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 356
Portland, Oregon 97232-2036

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June 19, 2006

Mr. Gary Beck, Project Manager
BPA Public Affairs
BPA – DKC-7
P.O. Box 14428
Portland, Oregon 97293

Dear Mr. Beck:

The U.S. Department of the Interior (Department) has reviewed the Bonneville Power Administration's (BPA) Draft Environmental Impact Statement (DEIS) for the proposed interconnection of up to 300 megawatts of electricity generated from the proposed Klondike III Wind Project (PPM Energy, Inc.), and 400 megawatts from the proposed Biglow Canyon Wind Farm (Portland General Electric), into the Federal Columbia River Transmission System. The following comments are based on the information provided in the DEIS. We reserve the right to provide further comments on any additional information that becomes available.

General Comments

005-1 The Department believes that the purpose and need identified in the DEIS, including minimizing environmental impacts of the Proposed Action, would be best achieved by broadening the document's cumulative impacts analysis, and incorporating the modifications recommended in this letter. We look forward to working with the applicant to minimize the project's contribution to cumulative adverse impacts on birds and bats along the Columbia River corridor. Based on our review of the DEIS, we have the following concerns: 1) avian mortalities from collision or electrocution; 2) the need for upgrading or retrofitting existing structures within the project area to minimize man-made attractants (e.g., perches); and 3) the need for the implementation of post-construction avian and bat fatality monitoring.

005-2 Any changes in local land use implemented during a projected 20-25 year lifespan of the proposed project will impact wildlife use over broad areas of the landscape. Conversion to

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agriculture (e.g., cottonwood farming, crop changes or rotation), habitat fragmentation, livestock grazing, urbanization, and the fire cycle have been identified as large scale management issues in the eastside shrubland and grassland habitats of Oregon and Washington (Johnson and O'Neil 2001). Other species affected by changes in the shrub-steppe landscape due to proposed development are reptiles, amphibians, and small mammals, and the DEIS does not discuss impacts to these resources. The Department recommends that the FEIS discuss the cumulative impacts of the reasonably foreseeable changes in land use and effects on reptiles, amphibians, and small mammals. Also, the DEIS states the number, relative percentage, and species of night migrants (birds and bats) within the proposed Klondike III/Biglow Canyon turbine rotor-blades swept area (RSA) is not known and therefore is not addressed. This information should be collected and analyzed for the FEIS. Further, there has been a rapid escalation of wind power projects east of the Cascade Mountain Range along the Columbia River, and the DEIS's cumulative impacts analysis for avian and bat species should more thoroughly address the cumulative effects of other planned wind power projects in surrounding counties, including Klickitat County to the north.

005-2

005-3

005-4

005-5

The proposed installations of transmission lines have the potential to increase raptor perching opportunities within the project area. Perch sites currently available within the project area, both natural and man-made, should be assessed in the FEIS. Man-made perch sites should be considered for removal, if necessary, to reduce the risk of turbine collision. The Department is concerned that, due to the adjacency of the project site to the Columbia and John Day Rivers, resident and wintering bald eagles will be attracted to the new transmission lines and exposed to turbine collision This potential impact should be assessed and analyzed in the FEIS.

005-6

005-7

The DEIS indicates that as many as 440 turbines are proposed for this project, and that avian and bat species mortalities each would average several hundred per year for this project alone. The document also indicates, throughout Chapter 4 *Environmental Consequences*, that mitigation measures for habitat restoration and re-vegetation, in consultation with the Oregon Department of Fish and Wildlife, appears to be through the use of "seed mixes." There is no mention, however, of the types of seeds, timing of the restoration, or of the expected effects reseeding might have on the bird and bat populations at the project site. The FEIS should include this information. Also, as high mortalities for both birds and bats could be expected, consideration should be given to amelioration of potential losses through some type of adaptive management practice (e.g., reseeding or re-vegetation efforts to attract birds and pollinating insects away from the project turbines). The development and implementation of an adaptive management framework for the project should be included in the FEIS.

005-8

005-9

Table 4-1 of the DEIS identifies the reasonably foreseeable future wind power projects in the vicinity (adjacent counties) of the Klondike III/Biglow Canyon wind power project totaling 3,134 MW of electricity or approximately 1,740 turbines (assuming an average of 1.8 MW/turbine). Using the mortality rate per turbine provided in the DEIS, 42 raptors, 1,740 – 3,480 passerines, and 2,610 – 4,350 bat fatalities would be expected each year for the

existing, planned and reasonably foreseeable wind projects including Klondike III/Biglow
005-10 Canyon. These projected fatality rates pose a significant threat to wildlife. Since
considerable uncertainty exists regarding the relationship between newer turbine
005-11 technologies and bird deaths created by large-scale wind farms, the Department recommends that the FEIS better address avian and bat mortalities as well as effectiveness monitoring to permit accurate, future assessments about the proposed projects' level of impact on avian and bats species. The Department also recommends that the FEIS include the following
005-12 modifications and additions to the mitigation measures discussed in "Chapter 4 – Environmental Consequences", sections 4.6 (Fish and Wildlife) and 4.7 (Vegetation):

005-13 • The current *Cumulative Impacts* section analysis only addresses Klondike I, II, III and Biglow Canyon wind projects. The FEIS should include an analysis of the impacts to birds and bats for all wind power projects listed in Table 4-1.

005-14 • The monitoring program should include long-term injury/fatality monitoring to address the assumptions included in the *Cumulative Impacts* analysis. The Department recommends that a formal long-term monitoring plan and agreement be developed between the U.S. Fish and Wildlife Service (Service), Oregon Department of Fish and Wildlife, BPA, PPM Energy, Inc., and Portland General Electric to assess the cumulative effect of this and other wind power projects in vicinity (see Table 4-1).

005-15 • Proposed mitigation measures should include a formal monitoring plan and agreement to ensure that mitigation measures are completed and that habitat restoration and revegetation are effective.

005-16 • For the Pacific Northwest region, the hoary bat (*Lasiurus cinereus*) and silver-haired bat (*Lasionycteris noctivagans*) appear to be at the greatest risk from collision with wind turbines. Bat impacts from new generation large scale wind projects are relatively unknown. Bat surveys should be completed for the Klondike III/Biglow Canyon wind project to determine from a regional perspective the potential risk to these local populations. Studies should also be completed to determine bat migratory patterns,
005-17 patterns of local movements through the area, and the response of bats to turbines, individually and collectively.

005-18 • To reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

005-19 • Where feasible, existing guy wires should be marked with recommended bird deterrent devices (Avian Power Line Interaction Committee 1994).

005-20 • Buried transmission lines, electric lines, and other cables should be co-located on the access road when practical.

005-21 • Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site. Previous reports indicate that several bird species

005-21 have been killed when attracted to wind energy sites by the lighting associated with nearby transformer substations (or other buildings and ancillary structures) during low-lying fog or heavy mist events. Lighting of these sites should only be used when necessary for required maintenance, and light fixtures should be directionally located to illuminate only those areas on the ground necessary for maintenance.

005-22 • Turbine construction should be encouraged to occur outside the breeding season for migratory birds when practical.

005-23 • Turbines should be sited as close to existing roads as practical. Road access and fencing
005-24 should be minimized to reduce or prevent habitat fragmentation and disturbance, and to
005-25 reduce above ground obstacles to birds in flight. All infrastructures should be capable of withstanding periodic burning of vegetation, as natural fires or controlled burns are necessary for maintaining grassland habitats.

005-26 • Identify within the project area where pole configuration(s) present a current electrocution risk. Describe specific steps that have been taken, or are planned to reduce or remove the threat of electrocution to raptors in high and low risk areas. Describe existing opportunities to further reduce the risk of raptor electrocutions, in order to reduce the cost of prevention; (e.g. using routine inspection and maintenance visits to install raptor protection devices on low and high risk configuration poles.

005-27 • Monitor raptor-safe configurations in high risk areas and low risk areas. Periodically inspect to identify areas of concern and report on the installation, efficacy of design, and degradation in the field of whatever bird protection devices are employed (according to published literature on avian power line electrocution, field observations indicate a significant number of bird protection devices are incompletely or improperly installed and may degrade in the field).

005-28 • Monitoring standards and guidelines should be established in the FEIS. Statistical comparisons of bird mortality are the most common measure of data collected at these facilities. Much of the discrepancy in bird collision data comes from two causes; a lack of comparable methodology between studies, and trying to compare disparately situated sites (Tingley 2003). Once estimates, methods, and metrics are comparable, they can be used to share site, design, and management information with other facilities to reduce harm to wildlife and their habitats. Guidance should be provided in the FEIS for site-specific proposals to determine whether conservation objectives are being met.

005-29 • Within the DEIS no references are made to the decommissioning process of the proposed project(s). In other readings, the expected lifespan of wind farm projects has been estimated at 20-25 years. The expected life span of the project, and decommissioning process, should be included for the proposed wind farm developments.

005-30 • There is no mention in the DEIS of a fire plan, fire control, fire abatement, or the effects of fire on wildlife and wildlife habitat within the project area. Since fire can be a major agent of change in shrub-steppe habitats, and affect both plant and animal populations in a variety of ways, it should be addressed in the FEIS.

005-31 If it is determined that any of these recommended measures can not be implemented, then the FEIS should provide a justification for that determination. In addition, information on the

005-32 final location and specifications of the proposed towers, including notification of which of the conservation measures recommended above for the protection of migratory birds and bats were implemented, should be provided to the Service. Consultation and technical assistance requests, information, questions, comments, documents, and required progress reports should be directed to Mr. Kemper McMaster, Supervisor, U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, 2600 SE 98th Avenue, Suite 100, Portland, Oregon 97266, at (503) 231-6179.

We appreciate the opportunity to comment and we look forward to working with the applicant to further protect fish and wildlife resources within the project area during the life of the project.

Sincerely,

Preston Sleeger
Regional Environmental Officer

cc: OEPC, Washington, DC (Rai)
RSOL, Portland, OR (Shishido)
FWS/DNRC, Portland, OR (Mead)
FWS/MBHP, Portland, OR (Green)
FWS, Portland, OR (McMaster)
FWS, Bend, OR (Gilbert)

REFERENCES

Avian Power Interaction Committee. 1994. Mitigating bird collisions with power lines: the state of the art in 1994. Edison Electric Institute, Washington, DC. 78 pp.

Johnson , D.H. and T.A. O'Neil. 2001. Wildlife-Habitat Relationships in Oregon and Washington. Oregon State University Press. 736 pages.

Tingley, M.W., 2003. Effects of Offshore Wind Farms on Birds. Harvard University, Cambridge, MA, 117 pages.

U.S. Fish and Wildlife Service. 2003. Service Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines. 55 pp.

Responses:

005-1 Comment noted. Regarding the concerns expressed in the comment, please see responses 005-2 through 005-32.

005-2 The FEIS has been modified to include the information about large scale wildlife management issues provided by the comment (see Section 4.6.7) and to provide additional discussion of possible impacts to reptiles, amphibians, and small mammals (see Section 4.6.2.1).

005-3 The FEIS has been modified to provide additional discussion of possible cumulative impacts to reptiles, amphibians, and small mammals (see Section 4.6.7).

005-4 As discussed in Section 4.6.7 of the EIS, it is estimated that about 660 to 1,100 bats, 440-880 passerines, and 11 raptors could suffer fatal injuries from collisions with the turbines each year. These figures include night migrants. Both wind project proponents have developed monitoring plans that will regularly monitor bird and bat fatalities at each facility and adjust mitigation efforts accordingly. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that these monitoring plans be implemented (see Appendices G and I).

005-5 The DEIS addressed the cumulative bird and bat impacts for 16 existing, proposed, and potential wind projects in Sherman and surrounding counties, including three in Klickitat County, Washington (Goodnoe Hills, Big Horn and White Creek). See pages 4-34 through 4-38 of the DEIS and Section 4.6.7 of the FEIS. BPA believes that the EIS provides a reasonable analysis of potential cumulative bird and bat impacts, based on information available about existing and planned wind projects in the region.

005-6 New transmission line supports (both wood poles and steel structures, including steel tubes and lattice steel towers) would provide the potential to increase raptor perch opportunities in the project area as would new wind turbines and new fencing around the new substations. The control houses and other equipment within the substations could also create additional perch sites.

A number of man-made perch sites already exist in the project area, such as residential structures, utility poles and lines, fence posts, road signs and existing wind farms (Klondike I and II). BPA has no authority to require removing any of these man-made structures, but recommends that the commenter work with the developers of the proposed wind projects to investigate structure removal where feasible and appropriate. Any structure removal would require compensation for the landowner or utility and other means to provide the service or amenity.

005-7 BPA believes that the potential for bald eagles to be attracted to the new transmission line and thus suffer greater exposure to turbine collision is small. There is no habitat within the project area that would support eagle use, and no large sources of carrion (e.g., sheep or cattle pastures) that would attract bald eagles. With the exception of the area around the John Day Substation (where there are already multiple transmission structures), the new transmission lines

would be located away from open water with limited or no line-of-sight to open water. Bald eagle use of the project area would likely be limited to eagles traveling between the Columbia River and the John Day River, and these eagles would generally be flying at altitudes well above the turbines. The EIS has been revised to reflect this information (see Section 4.6.2.1).

005-8 Most proposed site restoration would occur on agricultural fields and would consist either of a temporary cover crop approved by the landowner or the grain crop that would ordinarily be planted on the remainder of the field. A native seed mix has been developed that would be used for site restoration of the small amount of native shrub-steppe and grassland habitats disturbed by the project, and for the mitigation sites. The revegetation and habitat mitigation plans for the proposed wind projects contained in Appendices F and H contain a discussion of the proposed mitigation and a description of the seed mix. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that these plans be implemented (see Appendices G and I).

005-9 The seed mix used for site restoration would be designed to mimic existing conditions. Thus, no changes in bird/bat use are expected. Should birds or bat mortalities exceed thresholds described in Chapter 4, additional mitigation in the form of off-site habitat enhancement or restoration would be undertaken. See Appendices F and H for details about the additional mitigation proposed by the wind developers. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that these plans be followed (see Appendices G and I).

005-10 BPA believes that the total number of birds expected to be killed by all the wind farms listed in Table 4-1 is not likely significant when measured against the estimated regional bird population (between 0.2 and 0.4 percent of the total regional bird population). However, BPA does recognize that some species may suffer disproportionate impacts which could affect their populations to some degree. This has been discussed in Chapter 4.

005-11 The existing analysis of potential impacts to bats and birds is based on studies of other wind farms and site-specific data collected for this project, and BPA believes that the impact analysis is adequate under NEPA to identify potential impacts. BPA recognizes that some uncertainty exists concerning potential impacts to bird species from newer turbine technologies. A comprehensive monitoring plan has been developed for each wind project (see Appendices F and H) that will assess actual impacts to birds and bats from operation of the wind farms. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that these plans be implemented (see Appendices G and I).

005-12 Comment noted. The recommendations of the commenter are addressed in responses 005-13 through 005-30.

005-13 The cumulative impacts section of the EIS includes an additional analysis of impacts to birds and bats for all the wind projects listed in Table 4-1. This analysis can be found on page 4-36 and 4-37 of the DEIS and Section 4.6.7 of the FEIS.

005-14 Both PPM and PGE have developed long-term injury/fatality monitoring plans for the proposed wind projects and associated facilities. These are included in Appendices F and H of the FEIS. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that these plans be implemented (see Appendices G and I). As discussed throughout Chapter 4.6 of the EIS, the proposed transmission lines are not expected to be more than an incidental and isolated cause of injury or mortality to any species. Additional monitoring for the proposed lines therefore is not proposed.

With respect to the recommendation that a formal long-term monitoring plan and agreement be developed between multiple parties to assess the cumulative impacts of this and other wind projects in the area, BPA believes that it would be appropriate for the commenter to work directly with the proponents of these wind projects to determine if such a plan and agreement could be negotiated.

005-15 Both PPM and PGE have developed mitigation/monitoring plans as part of the site certificate process for the proposed wind projects. These are included in Appendices F and H. The mitigation measures identified in Chapter 4.6 of this EIS have been updated to reflect the most current information about these mitigation plans.

005-16 Bat mortality estimates have been determined based on monitoring from nearby existing wind farms (see Section 4.6.7), and BPA believes that the EIS provides a reasonable analysis of potential impacts based on generally available information. BPA agrees that regional bat populations are not well understood and that regional studies of bats would be useful. BPA has recently learned that there are currently efforts underway to develop bat population data for most of Oregon and Washington, most notably studies being conducted by the U.S. Forest Service and the Bureau of Land Management. When this data becomes available, it could prove useful for future efforts to more fully characterize potential bat impacts. BPA believes that information collected during monitoring of the various existing and proposed projects, coupled with the larger bat studies underway, will also be effective in characterizing regional bat impacts from wind projects.

005-17 See response 005-16.

005-18 Because the proposed project does not include proposed antennas, this comment does not appear to be applicable to this project.

005-19 Retrofitting guy wires on existing facilities in the area is outside the scope of this EIS; however, providing mitigation for any new guy wires that would be installed on either wind farm or BPA's transmission facilities is within the scope.

No guy wires would be used for BPA’s structures. PPM is not proposing using any guy wires for their structures.

While we understand that the only facilities that may be guyed would be some meteorological towers that would be installed by PGE for Biglow Canyon, PGE's site certificate specifies in the event a mortality threshold is exceeded, then

mitigation would be determined in consultation with Oregon Department of Fish and Wildlife and the Oregon Department of Energy.

005-20 BPA is not proposing to bury its transmission line; however, a grounding mat is proposed at each structure/steel tube to dissipate electrical energy into ground, should there be a fault on the line, such as that which would be caused by a lighting strike.

Both wind developers would bury a portion of their proposed transmission lines; PPM proposes primarily burying in the road prism (see Section 2.5.1.2).

005-21 Comment noted. Minimizing lighting and shielding security lighting would reduce light and glare and also reduce the likelihood that the light would attract insects, which could in turn attract birds and bats. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that security lights be shielded and downward-directed, and that light sources be minimized (see Appendices G and I).

005-22 Comment noted. Although some turbine construction may occur outside of the migratory bird breeding season (generally from March through August) when practical, construction would primarily need to occur during summer months due to access issues and greater habitat disturbance potential during other, wetter times of the year. The Site Certificates for each of the proposed wind projects include conditions that place limitations on project construction, including turbine construction, during migratory bird breeding season (see Appendices G and I). These conditions require that a survey, following a protocol approved by the Oregon Department of Fish and Wildlife (ODFW), be conducted during the year in which construction is to occur to determine whether there are any active Swainson's hawk, golden eagle, ferruginous hawk, and burrowing owl nests within a half-mile of any areas that would be disturbed during construction. A 1,300-foot buffer area would be protected during the breeding season around any active nests that are found. No high-impact construction activities (e.g., blasting, grading or other major ground disturbance) or high levels of construction traffic would be allowed within this buffer area. An independent biological monitor would observe active nest sites during breeding season for any signs of disturbance. If the monitor observes nest site abandonment or other adverse impacts to nesting activity due to construction activity, the wind project developers would be required to consult with ODFW and implement appropriate additional mitigation.

005-23 Comment noted. Turbine siting was addressed through the site certificate process for each proposed wind project. Although most of the wind project sites are already disturbed areas in agricultural use, the wind project developers have attempted to site their wind turbines as close to existing roads as practical.

005-24 Comment noted. New road construction for the proposed wind projects would be kept to the minimum practicable while still allowing sufficient access to project facilities. As with other existing wind projects in the general area, it is expected that fencing would be limited to only proposed project substations.

005-25 Comment noted. All proposed infrastructure is typically designed to withstand natural and manmade hazards including fires, to the extent practicable.

005-26 PPM proposes to bury all of its 34.5-kV power lines underground. PGE proposes to bury some power lines, but also have some above ground. Neither BPA's 230-kV transmission line nor PGE's 34.5-kV transmission lines would pose an electrocution risk to raptors. All transmission line structures have been designed using raptor-safe guidelines, which include minimum separation of phases of the conductors of no less than 7 feet for PGE's lines and 22 feet for BPA's line, and adequate clearance between conductors and grounded portions of the structure.

005-27 Since there would be no danger of electrocution to raptors or any other birds in the area as a result of the proposed project, there would be no need to monitor the lines as suggested (see also 005-26).

005-28 Standards and guidelines for bird mortality studies have been established through the site certificate process for each proposed wind project. Please see Appendices F and H.

005-29 The Klondike III Wind Project is expected to have a useful life of at least 25 to 30 years, while the Biglow Canyon Wind Farm is expected to have a useful life of at least 20 to 30 years. However, the lifespan of either project could be extended indefinitely by replacing existing wind turbines, towers, or other infrastructure with new, more efficient turbines or related equipment.

OAR 345-027-0020(9) requires that certificate holders, such as the developers of the two wind projects, shall retire their facilities if the holder permanently ceases construction or operation of their facilities, and the facilities shall be retired according to a final retirement plan approved by the Energy Facility Siting Council, as described in OAR 345-027-0110. The state law requires that the developers shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, not withstanding the Council's approval in the site certificates of an estimated amount required to restore the sites.

Restoring either of the wind project sites to a useful, non-hazardous condition upon retirement would involve dismantling all aboveground structures, including the wind turbines, meteorological towers, transmission lines, O&M buildings and substations, removing foundations and grading and replanting the affected area. Nacelles and rotors would be removed, and the turbine towers would be dismantled. Pad-mounted transformers and related above-ground equipment would be removed. Gravel would be removed from adjacent turbine pad areas. Concrete turbine and transformer pads and underground foundations would be removed to a minimum depth of 3 feet below grade. At a depth of 3 feet, buried materials are not expected to interfere with farming practices.

Above ground transmission lines and support structures also would be removed. Underground transmission lines and communication cables that are at least 3 feet below grade would be left in place. All excavated areas would be filled with topsoil. The surface would be graded as appropriate for agricultural uses. The affected areas, including areas temporarily disturbed during site restoration

activities, would be replanted with native plant seed mixes or agricultural crops, as appropriate, based on the use of surrounding lands. Facility access roads would be removed. Road areas would be restored with topsoil, graded and replanted with native plant seed mixes or agricultural crops, as appropriate. Alternatively, access roads on private property might be left in place based on landowner preference. Demolition waste material would be disposed at authorized sites.

Please see the discussion beginning on page 16 of the Final Order on the Application for the Klondike III Wind Project (Appendix F to this EIS) and on page 18 of the Final Order on the Application for the Biglow Canyon project (Appendix H of this EIS) for more information concerning the retirement plans for the proposed wind projects.

005-30 As a condition of receiving a site certificate from the State of Oregon, certificate holders would develop and implement a fire management plan during construction in consultation with local fire control authorities (Condition 66). The plan would include measures to reduce the risk of wildfire and to respond to any fires that occur on the facility sites. Both certificate holders need to ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames such a cutting torches are kept away from dry grass (Condition 68).

With respect to construction of BPA's double-circuit 230-kV transmission line, BPA routinely requires that its contractors prepare a fire plan that addresses prevention, how to be prepared for a fire, and the steps to take in the event of a fire. With regard to operation of the high-voltage transmission line, fire could result in the unlikely event that one or more of the conductors were to separate from the tower(s) and fall to the ground. As stated in the DEIS (Page 4-69), the North Sherman County Rural Fire Protection District has indicated that the proposed projects (both wind farms and BPA's transmission line), would not affect the department's ability to provide fire protection at the site.

Additionally, conditions 65, 67, 69, 70 and 71 of the final order granting a site certificate for Klondike III also addresses fire prevention, and what to do in the event of a fire. For the Biglow Canyon project, conditions 92 through 98 address this same issue. Please see Appendices F and H to review these conditions.

005-31 Comment noted. Please see responses 005-13 through 005-30.

005-32 Comment noted. We recommend that the commenter contact the developers of the proposed wind projects for final design information when it becomes available. The wind developers are required to submit annual reports to Oregon EFSC regarding mitigation efforts and monitoring results. BPA suggests that the commenter contact EFSC to obtain copies of these reports.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

June 19, 2006

Reply To
Attn Of:ETPA-088

Ref: 05-010-BPA

Gene Lynard
Bonneville Power Administration, KEC-4
P. O. Box 12999
Portland, OR 97208-3621

Mr. Lynard:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (EIS) for the proposed **Klondike III/Biglow Canyon Wind Integration Project** (CEQ 20060160) in Sherman County, Oregon. The review was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA). This section of the CAA directs EPA to specifically review and comment in writing on the environmental impacts associated with all major federal actions. Under our policies and procedures, we evaluate the document's adequacy in meeting NEPA requirements.

The draft EIS assesses the impacts of a proposal to integrate electrical power from two wind power generation farms, Klondike III and Biglow Canyon, and to interconnect them to the Federal Columbia River Transmission System (FCRTS). If implemented, the proposed project would require the Bonneville Power Administration (BPA) to execute agreements with Orion and PPM to provide interconnection services, build and operate an almost 12-mile double-circuit 230-kV transmission line and a new 230-kV Substation, and expand and place new equipment in BPA's existing John Day 500-kV Substation. Analysis of effects that would result from the proposed action considered the following five alternative actions: No action, Proposed action (**Preferred Alternative**), Middle Alternative, Klondike III wind farm, and Biglow wind farm.

Under No action, the proposed project would not occur and no impacts would be expected. With all other action alternatives, there would be low to positive impacts to resources within the project area, with the exception of the Klondike III and Biglow wind farm alternatives, which may result in significant impacts to visual resources. The beneficial impacts of this project would be primarily socioeconomic due to job creation, land and easements acquisitions, and compensation to landowners for impacts to their farmlands and crops during the project construction. There would also be positive ecological impacts because there would be no new sources of pollution to influence climate change.

006-1 The draft EIS document includes a good analysis of anticipated environmental impacts from the project and identifies mitigation measures to offset the impacts and monitor effectiveness. The draft EIS also states that Best Management Practices (BMPs) would be used to minimize any potential impacts. Since wind power technology and configuration of wind turbines in the project area are still relatively new, effective adaptive management will also be important to minimize and mitigate impacts.

006-2 Even though EPA supports development of alternative and environmentally sustainable sources of energy such as wind power, the final EIS should include more clarifying information to some sections of the draft EIS as indicated below.

006-3 **Alternatives:** In our scoping comments in January 2006, we requested that the draft EIS include a range of reasonable alternatives that would, independent of each other, meet the stated purpose and need for the proposed project to ensure a clear choice among individual alternatives. While the Proposed action and Middle alternatives would meet the purpose and need for the project, the individual wind farm alternatives do not. The final EIS should include information clarifying how the two wind farms would be connected to the Federal Columbia River Transmission System without use of North and Middle transmission lines, which are distinct alternatives (see Map 1). It would also be helpful to have a topographic map or sketch showing wind turbine locations and alignment plans and how they would be interconnected to BPA transmission lines.

006-4 **Wetlands:** Although it would appear that there are few jurisdictional and non-jurisdictional wetlands on the project site (p. 3-12), impacts to wetlands should be avoided whenever possible, and unavoidable impacts should be mitigated.

006-5 **Air quality**: Air quality may be impacted in the short term due to construction activities and in the longer term due to traffic on dirt roads, emissions from vehicles and on-site operations, and cumulative impacts from surrounding activities such as agriculture and fire. Therefore, it will be important to monitor the situation and take corrective action if air quality standards are not met. Although Sherman County is an attainment area, it is worth noting that air quality impacts to sensitive populations can be considerable within a few hours of air contamination, even though the standards are not exceeded. Air quality monitoring strategies should therefore be tailored to local conditions.

006-6 **Consultations with Tribes:** During our telephone conversation, we learned from BPA that the project planning team held formal consultations with the tribes, but we did not find information about the outcomes of these consultations in the draft EIS. We recommend the final EIS discuss the process and outcomes of consultations with the tribes.

006-7 **Public participation:** On page 1-4 of the draft EIS, we noted that initial public involvement in the planning process for this project was limited. We hope that there will be an effort to boost public participation in this project planning and implementation. The draft EIS also indicates that public comments on the proposed action were solicited and key issues considered. We recommend that the final EIS include a discussion on the number of comments received and responses provided.

006-8 Based on our review, we have assigned a rating of EC-1 (Environmental Concerns-Adequate) to the draft EIS. This rating and a summary of our comments will be published in the Federal Register. A copy of the rating system used in conducting our review is enclosed for your reference.

Thank you for the opportunity to review this draft EIS. If you have questions or comments concerning our review, please contact Theogene Mbabaliye at (206) 553-6322.

Sincerely,

/S/

Christine B. Reichgott, Manager
NEPA Review Unit

Enclosure

cc: EPA Oregon Operations Office

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Responses:

006-1 Thank you for your comment.

006-2 Comment noted. Please see responses 006-3 through 006-7.

006-3 BPA believes that it has included an appropriate range of reasonable alternatives in the EIS to meet BPA's stated need for action concerning the proposal. The purpose and need statement defines the need for BPA to respond to the interconnection requests made by the wind developers, and to decide whether and where to construct a transmission line that would allow for the proposed interconnection. The alternatives analyzed in detail in the EIS were developed to respond to that need, with two alternatives for a transmission line route and substation providing interconnection, and a No Action Alternative. The EIS also explains how other transmission line alternatives were considered but were eliminated from detailed study in the EIS.

As a clarification, the two proposed wind projects discussed in the EIS are not alternatives under consideration in the EIS. Rather, these are identified in Section 2.5 of the EIS as the reasonably foreseeable consequence of implementing either of BPA's action alternatives. Both proposed wind projects would be connected to the FCRTS via either the North Alternative or Middle Alternative, if BPA decides to take one of the action alternatives.

With respect to the request for a topographic map showing the locations where the turbines would be sited, preliminary maps have been added to the EIS in Appendix J.

006-4 As discussed in the EIS, BPA's proposed transmission line would be located far from any of the identified wetlands in the project vicinity, and therefore no impacts to wetlands would occur. In addition, both of the proposed wind projects would be sited to avoid wetlands in their respective project areas. The Site Certificates issued by Oregon EFSC for each wind project contain conditions requiring that all on-site wetlands be avoided (see Appendices G and I).

006-5 Comment noted. See proposed mitigation activities in Section 4.12.3, Mitigation Measures and additional information in Section 3.12, Air Quality.

006-6 Early in the EIS process, BPA contacted five upper Columbia River tribes about the proposed project: the Confederated Tribes of the Warm Springs Indian Reservation, the Confederated Tribes of the Umatilla Reservation, the Yakama Indian Nation, the Wanapum Tribe, and the Nez Perce Tribe. During a site visit with the elders of the Warm Springs Indian Reservation, tribal members expressed concern about cultural resources being encountered during wind turbine construction in some areas. Sections 3.10 and 4.10 of the EIS have been revised to include this information.

In addition, the Warm Springs Indian Reservation has requested that monitoring be undertaken during construction activities. The DEIS identified cultural resource monitoring in specific areas where construction activities would likely

encounter cultural resources as a mitigation measure, should a decision be made to implement the Proposed Action.

006-7 Please see Section 1.4 of the FEIS for a description of the many opportunities BPA presented for the public to participate in this project. BPA had an extended scoping period, held public meetings in the potentially affected community and accepted comments through a web-based comment site and through traditional mail and phone options. In addition, the BPA project manager, project engineer, and other staff met with local landowners to make adjustments to the proposal to lessen impacts. The proposed routes for the BPA transmission line were changed based on public comments received during the scoping period. This FEIS includes the comments received on the DEIS and BPA's responses to those comments.

006-8 Comment noted.